Met Office

December 2016

The averaging period used for the following assessment was 1981-2010.

UK Overview

At the start of December the weather was settled with high pressure in charge, and it was often cold and frosty with fog patches, especially in the south. The anticyclone pulled away to the east, and between the 6th and 20th southerly winds prevailed and often brought very mild conditions. Although these brought some rain at times, for much of the time it remained quiet, with fog in places. There was an unsettled spell from the 21st to 26th, which was stormy at times in central and northern Britain, associated with the passage of Storm Barbara on the 23rd and Storm Conor on the 25th and 26th. It generally stayed mild during this spell, but wintry showers affected Scotland at times, especially on the 26th. Settled conditions returned from the 27th, and it turned cold and frosty for a time, especially in the south.

The UK mean temperature was 5.9 °C, which is 2.0 °C above the 1981-2010 long-term average, and the eighth warmest December in a series from 1910. It was mildest relative to average in the north, where anomalies exceeded 3 °C in parts of Scotland, but mean minimum temperatures were only slightly above normal in the south-east. It was a dry month except in north-west Scotland, with 65% of average rainfall overall, and it was particularly dry in south-east England. Sunshine was exactly 100% of average, and it was a sunny month in most central and eastern parts of England, and the east of Northern Ireland, but a dull month in Wales, Cumbria and most of Scotland.

The UK monthly extremes were as follows: A maximum temperature of 17.0 °C was recorded at Hawarden Airport (Flintshire) on the 7th. A minimum temperature of -11.0 °C was recorded at Cromdale (Moray) on the 5th. In the 24 hours ending at 0900 GMT on the 31st, 109.6 mm of rain fell at Kinlochewe (Wester Ross). A wind gust of 82 knots (94 mph) was recorded at Sella Ness (Shetland) on the 26th. Snow depths of 3 cm were reported at Cromdale (Moray) and Aviemore (Inverness-shire) on the 26th.

Weather impacts

In the first week of December, fog caused difficult driving conditions and disrupted flights at a number of airports across England and Wales. Fog caused further problems across the southern UK from the 11th to 12th and 17th to 19th, particularly at many airports including those around London, with flight delays and cancellations.

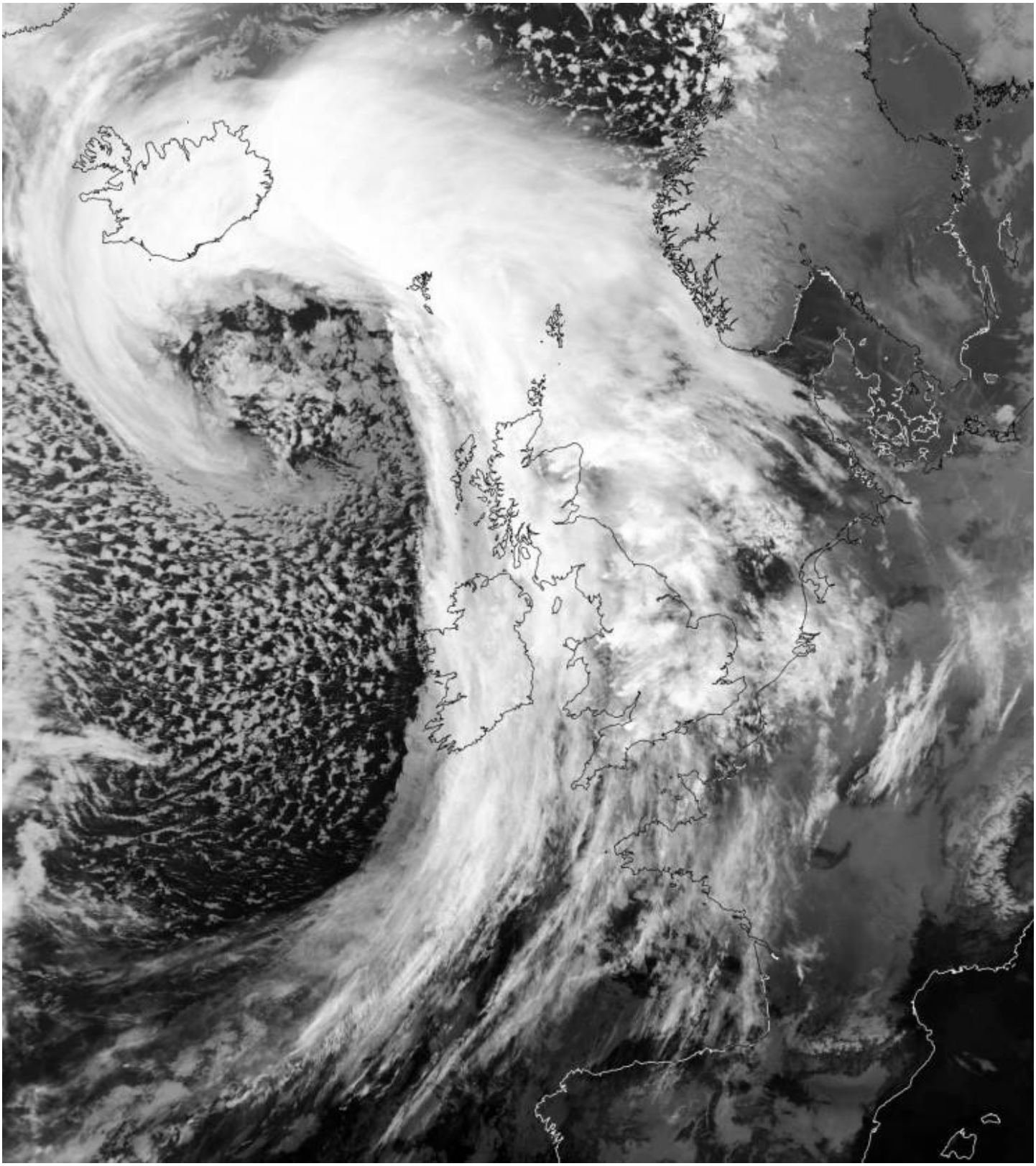
On the 21st to 22nd, gusts of 60-70mph led to the closure of a causeway on the Isle of Lewis due to wave overtopping and debris. Snow affected high level roads.

Storm Barbara brought strong winds and heavy rain to the north and west of the UK from the 23rd to 24th. The Western Isles were worst affected, with 13,000 customers without power across Lewis and Harris, but all homes were reconnected within two hours. Power cuts also affected thousands of properties across Wales and the Midlands. There was some localised traffic disruption due to fallen trees and property damage reported across these areas and northern England.

From Christmas Day and Boxing Day, storm Conor again brought stormy conditions across the north of the UK, with the Northern Isles worst affected. Ferry services and island flights were subject to disruption and there were further temporary power cuts.

Fog across the south became the biggest weather issue for the rest of the month. On the 28th, a woman died and several others were injured after four separate crashes involving 20 cars on the A40 in Oxfordshire. On the 29th, fog again disrupted flights at Heathrow and Luton Airports. A number of football matches were postponed or abandoned due to fog.

The satellite image below shows Storm Barbara and associated fronts on 23 December 2016. Image from the NERC satellite receiving station, Dundee University.



England diary of highlights

December began settled with high pressure in charge, and cold and frosty in the south but with temperatures nearer average in the north. From the 6th to the 20th, southerly winds brought generally mild and often quiet weather, though with some rain or drizzle at times. The 21st to 26th was unsettled and windy, especially in the north, but the month ended quiet, with widespread frost and fog especially in the south.

The mean temperature for December was1.6 °C above the 1981-2010 long-term average. Both mean maximum and minimum temperatures were about 2 °C above average in the north, but the mean minimum temperature was closer to average in the south-east. Rainfall was below normal almost everywhere, especially in the south-east, and with just 41% of average rainfall overall, it was the equal-sixth driest December in a series from 1910. Sunshine was generally near or rather below average in the west but mostly above average in central and eastern areas, with 111% of average overall.

1st to 5th

Dry and sunny for most on the 1st after a widespread frost inland, with a minimum of -7.3 °C at Upper Lambourn (Berkshire) and 7.9 hours of sunshine at East Malling (Kent). After a frosty start, the 2nd was cloudy for most, with some patchy rain. The 3rd was again mainly cloudy and dry, with some patchy rain across Cornwall. The 4th was a dry and sunny day after a cold start, with 7.6 hours of bright sunshine at Wallingford (Oxfordshire). The 5th was also dry and cold for most, but cloudier in the south-west, and it turned milder in the south.

6th to 10th

Widespread frost and fog in the east to start the 6th, then it turned mild with cloud and rain across the north from mid-afternoon. After a few patches of fog and frost across the south-east to start the 7th, it turned wet across the north-west later. It was mild again on the 8th with rain in the north during the morning, and a high of 15.8 °C at Exeter Airport (Devon). The 9th was cloudy with rain spreading south, leading to a cooler night for northern parts, but it remained very mild in the south. The 10th stayed mostly mild with cloud and rain spreading east across mainly southern counties.

11th to 16th

Patchy fog and frost cleared on the 11th to leave bright spells across southern counties, before patchy rain arrived in the south-west. It was generally cloudy on the 12th with some persistent fog over the north, Midlands and south-west, and patchy rain spread to all areas by evening. Dull and cloudy on the 13th, fog persisting in places, with bands of rain and drizzle crossing the country during the day. Central southern parts started foggy on the 14th, but the fog slowly cleared to leave a dry, sunny and very mild day. It was cooler in the east but mild elsewhere on the 15th, with hill fog in Devon and showers in western parts. The 16th was largely dry but cloudy after early ground frost in some southern parts.

17th to 20th

Persistent fog over central parts on the 17th caused some travel disruption, and it was bright or sunny over the north but generally cloudy elsewhere. Bright over the south-west on the 18th, elsewhere generally cloudy with persistent fog over central and southern counties, and some rain or drizzle down the east coast. Fog returned to central southern parts and the Vale of York on the 19th, persisting until lunchtime, otherwise it was generally cloudy with rain over the Midlands and south-west from mid-afternoon. Central and eastern parts were sunny on the 20th, but showers persisted near the south coast, and it was cloudier elsewhere with some rain in the far south-west into the evening.

21st to 26th

The 21st was cloudy, with rain over the north moving south, which cleared away into the evening with showers developing behind. The 22nd was largely cool with sunny spells after early showers in the north, turning wet and windy later. Storm Barbara on the 23rd brought heavy rain and widespread gale-force winds to northern parts with 70 mph recorded at High Bradfield (South Yorkshire) and 41.8 mm of rain at Shap (Cumbria). It was mild on the 24th with strong winds and showers, the showers being replaced by persistent rain later in the north-west. Mild and breezy again on the 25th, but turning cooler later with wintry showers on high ground in the north ahead of Storm Conor. The 26th was much cooler, dry in the south but wintry showers and strong winds prevailing further north with the passage of Storm Conor; High Bradfield (South Yorkshire) again reported gusts to 70mph.

27th to 31st

The 27th was fine with sunny spells after a frosty start particularly in the south. Dry again with long sunny spells after widespread frost and patchy fog on the 28th. The 29th started frosty away from coasts, with widespread fog, which persisted in the Vale of York, otherwise becoming mainly sunny. Central and southern parts remained cold with persistent fog on the 30th, cloudy elsewhere but sunny where any fog cleared. Fog persisted over central and southern parts on the 31st, and some showery rain crossed the south Midlands during the day and more general rain spread into the far north-west by evening.

Wales diary of highlights

December began settled and often cold and frosty, with high pressure in charge. The high moved away eastwards and between the 6th and 20th it was generally mild, often with southerly winds. There was an unsettled and windy spell from the 21st to 26th, followed by a dry and settled but often cloudy spell at the end of the month.

The mean temperature for December was provisionally 1.8 °C above the long-term average. It was a dry month, especially in the east, with 50% of average rainfall overall. Sunshine was 98% of average, and most parts had close to or below average sunshine, but it was a sunny month around Colwyn Bay.

1st to 5th

The 1st was dry and sunny, with 7.5 hours recorded at Tenby (Pembrokeshire), but it dawned cold and frosty with a minimum of -7.4°C at Usk (Monmouthshire). After another frosty start, the 2nd was mainly cloudy with some patchy rain. The 3rd was another mainly cloudy day, though dry, with some bright spells in many coastal areas. After a frosty start the 4th was again dry, with some good spells of sunshine. The 5th had another frosty start away from the south-west, leading into a mainly cloudy but dry day with some sunny intervals.

6th to 10th

It started cold in the north on the 6th with patchy frost and fog but turned cloudier and milder with patchy rain. The 7th was another mild day, Hawarden Airport (Flintshire) reaching 17.0 °C, but turned wet from mid-afternoon, the rain becoming heavy overnight – Capel Curig (Conwy) recorded 50.4 mm. The 8th was mild and dry after overnight rain cleared to leave brighter spells later. It was mild again on the 9th and patchy rain became heavier, especially in the north. The 10th was a wet day, with rain through the afternoon bringing about 10 mm widely to southern counties.

11th to 20th

The 11th was slightly cooler but dry throughout, with brighter spells especially in the south, clouding over later with rain spreading from the south overnight. It was cloudy on the 12th with patchy rain and drizzle affecting most areas. The 13th was another dull, cloudy day with fog in places and bands of rain and drizzle throughout the day. Bright and mild on the 14th, but some locally heavy rain affected the west for a few hours from late afternoon. The 15th was showery, with rain throughout the afternoon and early evening, but brighter in the

west. The 16th was wet in western parts, with rain lingering over Pembrokeshire until late in the day. It was cloudy and cooler on the 17th, and the 18th was cloudy too with some drizzle. The 19th was another dull and cloudy day, rain moving into the east after dark. The 20th was bright in the east, but cloudier elsewhere, with patchy light rain along the west coast becoming more persistent in the evening.

21st to 26th

It was mainly cloudy on the 21st with rain during the day, clearing from the north after dark. After a frost across southern parts, the 22nd saw blustery showers and sunny spells. Storm Barbara brought rain and strong winds on the 23rd, with gusts to 75 mph at Capel Curig and Mona (Anglesey). The 24th was mild and windy with gusts over 60 mph in places, and showers turned heavy later. The 25th was very mild, although windy with patchy rain, associated with the passage of Storm Conor. The 26th was cooler and brighter, with light showers, and remained windy in the north.

27th to 31st

The 27th was largely dry, after a cold start in eastern parts with a widespread ground frost. Dry again on the 28th after a widespread frost inland, with lengthy sunny spells in the west. Some places started very cold on the 29th, which was a dry but mainly cloudy day. A few fog patches to start the 30th cleared to leave a cloudy day with some light rain and drizzle in the south. The 31st was cloudy and mild, with some light and patchy rain in the south.

Scotland diary of highlights

December began settled with high pressure in charge, with some overnight frosts. From the 6th to the 20th, frequent southerly winds brought very mild and rather unsettled weather. It was stormy and changeable from the 21st to 26th, then the month ended with a relatively settled spell.

The mean temperature for December was 2.8 °C above the long-term average, making it the joint third warmest December in a series from 1910. Rainfall was below average in the Borders and in counties bordering the North Sea, but near or rather above average elsewhere, and Scotland as a whole had 90% of average. Sunshine was generally below average except in parts of the north, with 69% of average sunshine overall.

1st to 5th

The 1st was cloudy and mild, dry in the south, but isolated showers across northern parts increased overnight. After a frosty start, the 2nd was mainly cloudy with some patchy rain, mainly in the north and east. The 3rd was another mainly cloudy and dry day with some patchy rain across western coastal areas and Shetland. After a frosty start, the 4th was mainly dry with good spells of sunshine, and Kinloss (Moray) recorded 6.2 hours. The 5th had another frosty start with a minimum of -11.0 °C at Cromdale (Moray), but it was milder across western coastal areas and Shetland, and it was a mainly dry day with sunny spells.

6th to 11th

After a widespread frost the 6th turned increasingly cloudy, mild and locally very wet. It was exceptionally mild on the 7th, when Achfary (Sutherland) reached 16.6 °C, but windy throughout with gusts to 60 mph. After a very mild night across the north-west Highlands, the 8th was cloudy throughout, with rain across Argyll. The 9th was again mild, with rain across the north-west, followed by a cooler night. The 10th saw showers across western Scotland, and it remained mild. The 11th stayed largely dry, with just a few showers over the Western Isles.

12th to 16th

The morning of the 12th was bright towards the east, but it clouded over everywhere with patchy rain for the south and more substantial rain over the west coast. It was sunny over the far north-west on the 13th,

otherwise dull and cloudy, with fog in places, and bands of rain and drizzle crossed southern and eastern parts during the day. The 14th started bright in the east, but rain over the west spread slowly and erratically eastwards to cover all areas by early evening. After a cool night across northern parts, it turned mild on the 15th, but with showers in the west. The 16th saw rain in western central districts, but stayed mild throughout.

17th to 20th

It was generally cloudy on the 17th, with rain over the Western Isles spreading to all parts later. It was cloudy with rain over both western and eastern coasts on the 18th, but it tended to turn drier by evening. Starting bright over the east on the 19th, but otherwise a generally cloudy day with light rain over western parts. Morning fog in the central belt on the 20th cleared to leave a cloudy day, and rain spread eastwards to all parts by mid-evening.

21st to 26th

There was a mix of sunshine and heavy blustery showers for the 21st, with hail and sleet to low levels, snow over higher ground. After a chilly night, the 22nd was mild with rain in the west and winds strengthening to 50 to 60 mph across the Northern Isles. Storm Barbara brought widespread heavy rain and storm-force gusts on the 23rd. Heavy rain and very strong winds continued into the 24th with 50 mm recorded and winds gusting over 80mph in places. The 25th was very mild before wintry showers spread into northern areas, and it remained very windy throughout as Storm Conor approached. The 26th was a cold and blustery day with frequent showers of rain, sleet and snow, and 3 cm of lying snow was recorded at Cromdale (Moray) and Aviemore (Inverness-shire), with gales across the Northern Isles gusting to 94 mph at Sella Ness (Shetland) in the wake of Storm Conor.

27th to 31st

The 27th was largely dry, with sunny spells in favoured eastern districts. The 28th was cloudy, rather windy with patchy rain in western parts, otherwise dry and rather cool. It was mainly cloudy on the 29th with rain over the far north-west, drier and brighter in the south-east. It was windy and cloudy on the 30th with persistent rain over the north and west, amounting to 109.6 mm of rain at Kinlochewe (Wester Ross). The 31st started very wet, the rain spreading slowly southwards, reaching all areas by early evening, eventually being replaced by wintry showers in the north.

Northern Ireland diary of highlights

December began dry and settled with high pressure and variable amounts of cloud. A fortnight of mostly cloudy and mild weather followed, and it was particularly mild between the 6th and 9th. It was changeable and stormy between the 21st and 26th, then more settled during the last few days. The first half of the month was very dull, but the second half was much sunnier, especially in the east.

The mean temperature for December was 2.0 °C above the 1981-2010 average, the equal-seventh warmest December in a series from 1910. Rainfall was below average everywhere with 68% of average overall. Sunshine was 105% of average, with amounts generally above average in the east but near or slightly below average in the west and north-west.

1st to 5th

The 1st was cloudy but relatively mild, cooler overnight in the south and dry throughout. After a frosty start, the 2nd was mainly cloudy and dry. The 3rd was another cloudy day with some patchy rain. After a frosty start, the 4th was dry with some sunny intervals. There was a patchy frost to start the 5th, leading into a mainly cloudy but fine day with a few sunny intervals.

6th to 11th

The 6th was cloudy and mild, with a high of 16.2°C at Peatlands (County Armagh), with patchy rain and strong winds. The 7th was cloudy again and increasingly mild, with a strong breeze throughout the day. The 8th was another cloudy, mild day but somewhat drier and less windy. Overnight rain cleared early on the 9th, leaving a dry, cloudy and still mild day. The 10th was cooler, and saw some showers in the evening. After overnight scattered showers in northern parts died out, the 11th was mostly dry.

12th to 20th

It was cloudy on the 12th with patchy rain in the west by evening. The 13th was another cloudy day with fog and patchy rain or drizzle through the day. The 14th was a wet day, but the rain cleared the Province after dark. The 15th had rain throughout again, with 35.5 mm recorded at Trassey Slievenaman (County Down) and 10 to 20 mm widely elsewhere. After early rain, the 16th brightened up by midday leaving a rather cloudy and cooler day. It started bright on the 17th, turning cloudier into the afternoon with some light rain in the west by evening. The 18th was cloudy with patchy drizzle. The 19th had a cloudy morning but a sunny afternoon. After a cold night with a minimum of -6.0°C at Katesbridge (County Down), the 20th was dull, foggy, and cloudy with rain spreading to all parts by early evening.

21st to 26th

There was a mix of sunshine and blustery showers on the 21st, wintry over the higher ground. The 22nd was similar, with showers across the north and west following a widespread early frost. Storm Barbara on the 23rd brought storm-force winds, with gusts of 60 mph recorded at Ballypatrick (County Antrim) and heavy rain at times. There were scattered showers and strong winds for all areas on the 24th in the wake of Storm Barbara and winds exceeded 50 mph in places. Very windy again on the 25th with the approach of Storm Conor, turning wet and colder later with wintry showers. The 26th was cooler with sunshine, and showers often wintry over higher ground and strong winds along northern coasts in the wake of Storm Conor.

27th to 31st

The 27th was dry after a frosty start, with brighter spells across Antrim and Londonderry. It was dry and cloudy in the west, sunny in the east on the 28th. The 29th was a dry and sunny day, but it turned cloudy and milder on the 30th. The 31st was also cloudy and mild, and rain reached the north from mid-afternoon.

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